20

<u>Claims</u>

1 – A compound selected from those of formula (I):

The invention relates to cyclized quinazolines of formula (I)

$$(R_4)_m$$

$$A$$

$$(Z_1)_n$$

$$Y$$

$$O$$

$$R_3$$

$$(I)$$

in which:

W represents N or C-R₁; in which R₁ is selected from:

- hydrogen atom,
- OR₅, SR₅ in which R₅ is selected from hydrogen, (C₁-C₆)alkyl and aryl(C₁-C₆)alkyl,
- (C₁-C₆)alkyl, cycloalkyl of 3 to 8 carbon atoms optionally interrupted with one hetero atom selected from oxygen, sulfur and nitrogen, aryl, heteroaryl and aryl(C₁-C₆)alkyl, these groups being optionally substituted by (CH₂)p-OH or (CH₂)p-NH₂, in which p is an integer from 0 to 4 inclusive,

X represents N or C-R₂ in which R₂ is selected from:

- hydrogen atom,
- NR₆R₇, OR₆, SR₆ in which R₆ and R₇, identical or different, are selected from hydrogen, (C₁-C₆)alkyl and aryl(C₁-C₆)alkyl,
 - (C_1-C_6) alkyl, cycloalkyl of 3 to 8 carbon atoms optionally interrupted with one hetero atom selected from oxygen, sulfur and nitrogen, aryl, heteroaryl and aryl (C_1-C_6) alkyl, these groups being optionally substituted by (CH_2) p-OH or (CH_2) p-NH₂, in which p is an integer from 0 to 4 inclusive,

Y represents a group selected from oxygen, sulfur, -NH, and -N(C_1 - C_6)alkyl,

Z represents a group selected from:

15

20

- dxygen, sulphur,
- and -NR₈ in which R₈ represents a group selected from hydrogen, (C₁-C₆)alkyl, $aryl(C_1-C_6)alkyl$, cycloalkyl, aryl, and heteroaryl, and
- when Y\is oxygen, sulphur, or -N(C₁-C₆)alkyl, Z optionally represents a carbon atom which is optionally substituted by a group selected from (C₁-C₆)alkyl, aryl, aryl(C₁-C₆)alkyl, aromatic heterocycle, non-aromatic heterocycle, and cycloalkyl,

n is an integer from 0 to 8 inclusive,

Z₁ represents a group -CR₂R₁₀ wherein R₉ and R₁₀, identical or different, represent a group selected from hydrogen, (ChC6)alkyl, halo(C1-C6)alkyl, halogen, NR5R11, OR5, SR5 and C(=O)OR₅ in which R₅ and R₁, identical or different, represents hydrogen atom or (C₁-C₆)alkyl, and

- when n is greater than or equal to 2, the hydrocarbon chain Z₁ optionally contains one or more multiple bonds,
- and/or one of the carbon atoms in the hydrocarbon chain Z₁ may be replaced with an oxygen atom, a sulphur atom which is optionally substituted by one or two oxygen atoms, or a nitrogen atom which is optionally substituted by (C₁-C₆)alkyl,

A represents a group selected from:

- aromatic or non-aromatic, 5- or 6-membered monocycle comprising from 0 to 4 heteroatoms selected from nitrogen, oxygen and sulphur, and
- bicycle, composed of two aromatic or non-aromatic, 5- or 6-membered rings, which may be identical or different, comprising from 0 to 4 heteroatoms selected from nitrogen, oxygen and sulphur,

m is an integer from 0 to 7 inclusive,

the group(s) R₄, which may be identical or different, is (are)\selected from (C₁-C₆)alkyl, halogen, -CN, -NO₂, -SCF₃, -CF₃, -OCF₃, -NR₅R₁₁, -OR $\frac{1}{2}$, -SR₅, -SOR₅, -SO₂R₅, 25 $-(CH_2)_kSO_2NR_5R_{11}, \quad -X_1(CH_2)_kC(=O)OR_5, \quad -(CH_2)_kC(=O)OR_5, \quad -(CH_2)_kC(=$ $-(CH_2)_kC(=O)NR_5R_{11}$, and $-X_2-R_{12}$ in which:

- X_1 represents a group selected from oxygen, sulphur optionally substituted by one or two oxygen atoms, and nitrogen substituted by hydrogen or (C_1-C_6) alkyl,
- k is an integer from 0 to 3 inclusive,
- R₅ and R₁₁, which may be identical or different, are selected from hydrogen and (C₁-C₆)alkyl,
- X_2 represents a group selected from single bond, -CH₂-, oxygen atom, sulphur atom optionally substituted by one or two oxygen atoms, and nitrogen atom substituted by hydrogen atom or (C₁-C₆)alkyl group,
- R_{12} represents an aromatic or non-aromatic, heterocyclic or non-heterocyclic, 5- or 6-membered ring which is optionally substituted by one or more groups, which may be identical or different, selected from (C_1-C_6) alkyl, halogen, hydroxyl and amino, and when the ring is heterocyclic, it comprises from 1 to 4 heteroatoms selected from nitrogen, oxygen and sulphur,

R₃ represents a group selected from:

- hydrogen,
 - (C_1-C_6) alkyl, (C_2-C_6) alkenyl, (C_2-C_6) alkynyl, these groups being optionally substituted by one or more groups, which may be identical or different, selected from amino, cyano, halo (C_1-C_6) alkyl, cycloalkyl, $-C(=O)NR_5R_{11}$, $-C(=O)OR_5$, $-OR_5$, and $-SR_5$, in which R_5 and R_{11} , which may be identical or different, are as defined hereinbefore,
- and the group of formula:

$$(R_{13})_q$$
 B $(Z_2)_p$

- ✓ in which p is an integer from 0 to 8 inclusive,
- \checkmark Z₂ represents -CR₁₄R₁₅ wherein R₁₄ and R₁₅, identical or different, represent a group selected from hydrogen, (C₁-C₆)alkyl, phenyl, halo(C₁-C₆)alkyl, halogen, amino, -OR₅,

10

15

- $-NR_5R_{11}$, $-SR_5$ and $-C(=O)OR_5$ in which R_5 and R_{11} , identical or different, are as defined hereinbefore, and
- when p is greater than or equal to 2, the hydrocarbon chain \mathbb{Z}_2 optionally contains one or more multiple bonds,
- and/or one of the carbon atoms in the hydrocarbon chain \mathbb{Z}_2 may be replaced with an oxygen atom, a sulphur atom which is optionally substituted by one or two oxygen atoms, or a nitrogen atom which is optionally substituted by (C_1-C_6) alkyl,
- ✓ B represents a group selected from:
- aromatic or non-aromatic 5- or 6-membered monocycle comprising from 0 to 4 heteroatoms selected from nitrogen, oxygen and sulphur, and
- bicycle, composed of two aromatic or non-aromatic, 5- or 6-membered rings, which may be identical or different, comprising from 0 to 4 heteroatoms selected from nitrogen, oxygen and sulphur,
- ✓ q is an integer from 0 to 7 inclusive,
- ✓ the group(s) R_{13} , which may be identical or different, is (are) selected from (C_1-C_6) alkyl, halogen, -CN, $-NO_2$, $-CF_3$, $-OCF_3$, (C_1-C_6) acyl, $-(CH_2)_kNR_{16}R_{17}$, $-X_3-(CH_2)_kNR_{16}R_{17}$ $-N(R_{16})C(=O)R_{17}$, $-N(R_{16})C(=O)OR_{17}$, $-N(R_{16})SO_2R_{17}$, $-N(SO_2R_{16})_2$, $-OR_{16}$; $-S(O)_{k1}R_{16}$, $-(CH_2)_kSO_2NR_{16}R_{17}$, $-X_3(CH_2)_kC(=O)OR_{16}$, $-(CH_2)_kC(=O)NR_{16}R_{17}$, $-(CH_2)_kC(=O)NR_{16}R_{17}$,
- 20 $-C(=O)O-R_{19}-NR_{16}NR_{17}$ and $-X_4-R_{18}$, in which:
 - X₃ represents a group selected from oxygen, sulphur optionally substituted by one or two oxygen atoms, and nitrogen substituted by a hydrogen atom or a (C₁-C₆)alkyl group,
 - k is an integer from 0 to 3 inclusive,
 - k₁ is an integer from 0 to 2 inclusive,
 - R_{16} and R_{17} , which may be identical or different, are selected from hydrogen and (C_1-C_6) alkyl,

20

25

5

- X₄ represents a group selected from single bond, -CH₂-, oxygen atom, sulphur atom optionally substituted by one or two oxygen atoms, and nitrogen atom substituted by hydrogen atom or (C_1-C_6) alkyl group,
- R₁₈ represents an aromatic or non-aromatic, heterocyclic or non-heterocyclic, 5- or 6-membered ring, which is optionally substituted by one or more groups, which may be identical or different, selected from (C₁-C₆)alkyl, halogen, hydroxyl, (C_1-C_6) alkoxy, oxo, cyano, tetrazole, -NR₅R₁₁, and -C(=0)OR₅ wherein R₅ and R₁₁ are as defined hereinbefore, and, when the ring is heterocyclic, it comprises from 1 to 4 heteroatoms selected from nitrogen, oxygen and sulphur,
- R_{19} represents $\lambda(C_1-C_6)$ alkylene group, optionally, its racemic forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof,

it being understood that:

- aryl represents a monocycle or bicycle containing from 5 to 10 and preferably 5 to 6 carbon atoms,
- heteroaryl represents aryl, as defined hereinbefore, in which one to four carbon atoms are remplaced by one to four heteroatoms selected from nitrogen, oxygen and sulphur,
- cycloalkyl represents monocycle or bicycle containing from 3 to 10 and preferably from 3 to 6 carbon atoms,
- heterocycle represents heteroaryl as defined above, heteroaryl partially hydrogenated and cycloalkyl as defined above in which one to four carbon atoms are remplaced by one to four heteroatoms selected from oxygen, sulphur and nitrogen,
- $aryl(C_1-C_6)alkyl$ represents a group in which alkyl contains from 1 to 6 and preferably from 1 to 4 carbon atoms and aryl contains from 5 to 10 and preferably 5 or 6 carbon atoms,
 - cycloalkyl(C₁-C₆)alkyl represents a group in which alkyl contains from 1 to 6 and preferably from 1 to 3 carbon atoms and cycloalky\contains from 3 to 10 carbon atoms.
 - 2- A compound according to claim 1 characterized in that:
- 30 W is C-R₁ and X is N or C-R₂ in which R₁ and R₂, identical or different, are selected from hydrogen and methyl,

10

15

20

\ Y\is O,

Z represents an oxygen atom or -NH group,

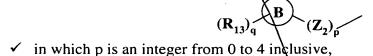
n is an integer from 0 to 4 inclusive,

 Z_1 represents a group -CR₉R₁₀ wherein R₉ and R₁₀, identical or different, represent a group selected from hydrogen, (C₁-C₆)alkyl, halo(C₁-C₆)alkyl, halogen, -NR₅R₁₁, -OR₅, -SR₅ and -C(=O)OR₅ in which R₅ and R₁₁, identical or different, represent hydrogen atom or (C₁-C₆)alkyl, and

- when n is greater than or equal to 2, the hydrocarbon chain Z_1 optionally contains one double bonds,
- and/or one of the carbon atoms in the hydrocarbon chain Z_1 may be replaced with an oxygen atom, a sulphur atom which is optionally substituted by one or two oxygen atoms, or a nitrogen atom which is optionally substituted by (C_1-C_6) alkyl,

R₃, R₄ and A are as defined in the compound of formula (I), optionally, its racemic forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof.

3- A compound according to claim 1 characterized in that: R₃ represents the group of formula :



 \checkmark Z_2 represents -CR₁₄R₁₅ wherein R₁₄ and R₁₅, identical or different, represent a group selected from hydrogen and methyl, and when p is greater than or equal to 2, the hydrocarbon chain Z_2 optionally contains one double bond,

represents a group selected from phenyl, pyridyl, thienyl, imidazolyl, furyl, 1,3-benzodioxolyl, benzodioxinyl, benzothienyl, benzofuryl, 2,1,3-benzothiadiazolyl, benzofurazanyl, and indolyl,

✓ q is an integer from 0 to 7 inclusive,

the group(s) R_{13} , which may be identical or different, is (are) selected from $(C_1\text{-}C_6)$ alkyl, halogen, -CN, -CF₃, -NR₁₆R₁₇, -OR₁₆, -SO₂R₁₆, -(CH₂)_kSO₂NR₁₆R₁₇, -O(CH₂)_kC(=O)OR₁₆, -(CH₂)_kC(=O)OR₁₆, -O(CH₂)_kC(=O)NR₁₆R₁₇, -C(=O)O-R₁₉-NR₁₆NR₁₇ and -(CH₂)_kC(=O)NR₁₆R₁₇, in which k is an integer from 0 to 3 inclusive, R₁₆ and R₁₇, which may be identical or different, are selected from hydrogen and $(C_1\text{-}C_6)$ alkyl, and R₁₉ represents a $(C_1\text{-}C_6)$ alkylene group,

W, X, Y, Z, Z_1 , n, m, A and R_4 are as defined in the compound of formula (I), optionally, its racemic forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof.

4- A compound according to claim 1 characterized in that: n is an integer from 0 to 4 inclusive,

Z₁ represents a group -CR₉R₁₀ wherein R₉ and R₁₀ represent each hydrogen atom, and

- when n is greater than or equal to 2, the hydrocarbon chain Z_1 optionally contains one double bond,
- and/or one of the carbon atoms in the hydrocarbon chain Z_1 may be replaced with an oxygen atom, a sulphur atom which is optionally substituted by one or two oxygen atoms, or a nitrogen atom which is optionally substituted by (C_1-C_6) alkyl,

A represents a group selected from phenyl, pyridyl, thienyl, imidazolyl, furyl, 1,3-benzodioxolyl, benzodioxinyl, benzothienyl, benzofuryl, 2,1,3-benzothiadiazolyl, benzofurazanyl, and indolyl,

m is an integer from 0 to 7 inclusive,

15

20

5

10

the group(s) R_4 , which may be identical or different, is (are) selected from (C_1-C_6) alkyl, halogen, -CN, -CF₃, -NR₅R₁₁, -OR₅, and -C(=O)OR₅ in which R₅ and R₁₁, which may be identical or different, are selected from hydrogen and (C_1-C_6) alkyl,

W, X, Y, λ and R₃ are as defined in the compound of formula (I),

optionally, its racemic forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof.

5- A compound according to claim 1 characterized in that:

W is $C-R_1$ and X is N or $C-R_2$ in which R_1 and R_2 , identical or different, are selected from hydrogen and methyl,

10 Y is O,

Z represents an oxygen atom or -NH group,

n is an integer from 0 to 4 inclusive,

 Z_1 represents a group $-CR_9R_{10}$ wherein R_9 and R_{10} , identical or different, represent a group selected from hydrogen and methyl, and

- when n is greater than or equal to 2, the hydrocarbon chain Z_1 optionally contains one or more multiple bonds,
 - and/or one of the carbon atoms in the hydrocarbon chain Z_1 may be replaced with an oxygen atom, a sulphur atom which is optionally substituted by one or two oxygen atoms, or a nitrogen atom which is optionally substituted by (C_1-C_6) alkyl,
- A represents a group selected from phenyl, pyridyl, thienyl, imidazolyl, furyl, 1,3-benzodioxolyl, benzodioxinyl, benzothienyl, benzofuryl, 2,1,3-benzothiadiazolyl, benzofurazanyl, and indolyl,

m is an integer from 0 to 7 inclusive,

10

5

T.

15

the group(s) R_4 , which may be identical or different, is (are) selected from (C_1-C_6) alkyl, halogen, -CN, -CF₃, -NR₅R₁₁, -OR₅, -SO₂R₅, -(CH₂)_kSO₂NR₅R₁₁, -X₁(CH₂)_kC(=O)OR₅, -(CH₂)_kC(=O)OR₅, -X₁(CH₂)_kC(=O)NR₅R₁₁, -(CH₂)_kC(=O)NR₅R₁₁, and -X₂-R₁₂ in which:

- \checkmark X₁ represents a group selected from oxygen, sulphur and -NH,
- ✓ k is an integer from 0 to 3 inclusive,
- \checkmark R₅ and R₁, which may be identical or different, are selected from hydrogen and (C₁-C₆)alkyl,
- \checkmark X₂ represents a group selected from single bond, -CH₂-, oxygen atom, and sulphur atom optionally substituted by one or two oxygen atoms,
- \checkmark R₁₂ represents an aromatic or non-aromatic, heterocyclic or non-heterocyclic, 5- or 6-membered ring which is optionally substituted by one or more groups, which may be identical or different, selected from (C₁-C₆)alkyl, halogen, hydroxyl and amino, and when the ring is heterocyclic, it comprises from 1 to 4 heteroatoms selected from nitrogen, oxygen and sulphur;

R₃ represents the group of formula:

$$(R_{13})_q$$
 B $(Z_2)_p$

- ✓ in which p is an integer from 0 to 6 inclusive,
- Z_2 represents -CR₁₄R₁₅ wherein R₁₄ and R₁₅, identical or different, represent a group selected from hydrogen, (C₁-C₆)alkyl, phenyl, halo(C₁-C₆)alkyl, halogen, amino, OR₅, SR₅ and -C(=0)OR₅ in which R₅ is as defined in the compound of formula (I), and
 - when p is greater than or equal to 2, the hydrocarbon chain \mathbb{Z}_2 optionally contains one or more multiple bonds,

IOOYSHUM NEIMOE 15

20

25

and/or one of the carbon atoms in the hydrocarbon chain \mathbb{Z}_2 may be replaced with an oxygen atom, a sulphur atom which is optionally substituted by one or two oxygen atoms, or a nitrogen atom which is optionally substituted by (C_1-C_6) alkyl,

- B represents a group selected from:
- aromatic or non-aromatic 5- or 6-membered monocycle comprising from 0 to 4 heteroatoms\selected from nitrogen, oxygen and sulphur, and
- bicycle, composed of two aromatic or non-aromatic, 5- or 6-membered rings, which may be identical or different, comprising from 0 to 4 heteroatoms selected from nitrogen, oxygen and sulphur,
- ✓ q is an integer from 0 to 7 inclusive,
- ✓ the group(s) R₁₃, which may be identical or different, is (are) selected from (C_1-C_6) alkyl, halogen, -CN, - (C_7-C_6) - $(C_7-C_$ $-X_3(CH_2)_kC(=O)NR_{16}R_{17}$, $-(CH_2)_kC(=O)OR_{16}$ $-X_3(CH_2)_kC(=O)OR_{16}$ $-(CH_2)_kC(=O)NR_{16}R_{17}$, $-C(=O)O-R_1$, $-NR_{16}NR_{17}$ and $-X_4-R_{18}$, in which:
 - X₃ represents a group selected from oxygen atom, sulphur atom and −NH group,
 - k is an integer from 0 to 3 inclusive,
 - R₁₆ and R₁₇, which may be identical or different, are selected from hydrogen and (C_1-C_6) alkyl,
 - X₄ represents a group selected from single bond, -CH₂-, oxygen atom, and sulphur atom optionally substituted by one or two oxygen atoms,
 - R₁₈ represents an aromatic or non-aromatic, heterocyclic or non-heterocyclic, 5or 6-membered ring, which is optionally substituted by one or more groups, which may be identical or different, selected from (C₁-C₆)alkyl, halogen, hydroxyl, and amino, and when the ring is heterocyclic, it comprises from 1 to 4 heteroatoms selected from nitrogen, oxygen and sulphur,
- R_{19} represents a (C_1-C_6) alkylene group, optionally, its racemic forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof.

6 A compound according to claim 1 characterized in that:

W is $C-R_1$ and X is N or $C-R_2$ in which R_1 and R_2 , identical or different, are selected from hydrogen and methyl,

Y is O,

5 Z represents an oxygen atom or a -NH group,

n is an integer from 0 to 4 inclusive,

 Z_1 represents a group $-CR_9R_{10}$ wherein R_9 and R_{10} , identical or different, represent a group selected from hydrogen and methyl, and

- when n is greater than or equal to 2, the hydrocarbon chain Z_1 optionally contains one double bond,
- and/or one of the carbon atoms in the hydrocarbon chain Z_1 may be replaced with an oxygen atom, a sulphur atom which is optionally substituted by one or two oxygen atoms, or a nitrogen atom which is optionally substituted by (C_1-C_6) alkyl,

A represents a group selected from phenyl, pyridyl, thienyl, imidazolyl, furyl, 1,3-benzodioxolyl, benzodioxinyl, benzothienyl, benzofuryl, 2,1,3-benzothiadiazolyl, benzofurazanyl, and indolyl,

m is an integer from 0 to 7 inclusive,

the group(s) R_4 , which may be identical or different, is (are) selected from (C_1-C_6) alkyl, halogen, -CN, -CF₃, -NR₅R₁₁, -OR₅, and -C(=O)OR₅, in which R₅ and R₁₁, which may be identical or different, are selected from hydrogen and (C_1-C_6) alkyl,

R₃ represents the group of formula:

$$(\mathbf{R}_{13})_{\mathbf{q}}$$
 \mathbf{B} $(\mathbf{Z}_{2})_{\mathbf{p}}$

Ţ [10

15

in which p is an integer from 0 to 4 inclusive,

- \checkmark Z₂ represents -CR₁₄R₁₅ wherein R₁₄ and R₁₅, identical or different, represent a group selected from hydrogen and methyl, and
- when p is greater than or equal to 2, the hydrocarbon chain \mathbb{Z}_2 optionally contains one double bond,
- and/or one of the carbon atoms in the hydrocarbon chain \mathbb{Z}_2 may be replaced with an oxygen atom, a sulphur atom which is optionally substituted by one or two oxygen atoms, or a nitrogen atom which is optionally substituted by (C_1-C_6) alkyl,
- ✓ B represents a group selected from phenyl, pyridyl, thienyl, imidazolyl, furyl, 1,3-benzodioxolyl, benzodioxinyl, benzothienyl, benzofuryl, 2,1,3-benzothiadiazolyl, benzofurazanyl, and indolyl,
- ✓ q is an integer from 0 to 7 inclusive,
- ✓ the group(s) R_{13} , which may be identical or different, is (are) selected from (C_1-C_6) alkyl, halogen, -CN, $-CF_3$, $-NR_{16}R_{17}$, $-OR_{16}$, $-SO_2R_{16}$, $-(CH_2)_kSO_2NR_{16}R_{17}$, $-X_3(CH_2)_kC(=O)OR_{16}$, $-(CH_2)_kC(=O)OR_{16}$, $-X_3(CH_2)_kC(=O)NR_{16}R_{17}$, $-(CH_2)_kC(=O)NR_{16}R_{17}$, and $-X_4-R_{18}$, in which :
 - X₃ represents a group selected from oxygen atom, sulphur atom and -NH group,
 - k is an integer from 0 to 3 inclusive,
 - R_{16} and R_{17} , which may be identical or different, are selected from hydrogen and (C_1-C_6) alkyl,
 - X₄ represents a group selected from single bond, -CH₂-, oxygen atom, and sulphur atom optionally substituted by one or two oxygen atoms,
 - R₁₈ represents an aromatic or non-aromatid, heterocyclic or non-heterocyclic, 5-or 6-membered ring, which is optionally substituted by one or more groups, which may be identical or different, selected from (C_1, C_6) alkyl, halogen, hydroxyl, and amino, and when the ring is heterocyclic, it comprises from 1 to 4 heteroatoms selected from nitrogen, oxygen and sulphur,
 - R₁₉ represents a (C₁-C₆)alkylene group,

15

5

10

25

optionally, its racemic forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof.

7- A compound according to claim 1 characterized in that:

W is $C-R_1$ and X is N or $C-R_2$ in which R_1 and R_2 , identical or different, are selected from hydrogen and methyl,

Y is O,

5

10

Z represents an oxygen atom or a -NH group,

n is an integer from 0 to 4 inclusive,

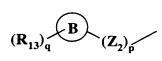
 Z_1 represents a methylen group, and

- when n is greater than or equal to 2, the hydrocarbon chain Z_1 optionally contains one double bond,
- and/or one of the carbon atoms in the hydrocarbon chain Z_1 may be replaced with an oxygen atom, a sulphur atom which is optionally substituted by one or two oxygen atoms, or a nitrogen atom which is optionally substituted by (C_1-C_6) alkyl,
- A represents a group selected from phenyl, pyridyl, thienyl, imidazolyl, furyl, 1,3-benzodioxolyl, benzodioxinyl, benzothienyl, benzofuryl, 2,1,3-benzothiadiazolyl, benzofurazanyl, and indolyl,

m is an integer from 0 to 7 inclusive,

the group(s) R_4 , which may be identical or different, is (are) selected from (C_1-C_6) alkyl, halogen, -CN, -CF₃, -NR₅R₁₁, -OR₅, and -C(=O)OR₅, in which R₅ and R₁₁, which may be identical or different, are selected from hydrogen and (C_1-C_6) alkyl,

R₃ represents the group of formula:



- ✓ in which p is an integer from 0 to 4 inclusive,
- \checkmark Z₂ represents -CR₁₄R₁₅ wherein R₁₄ and R₁₅, identical or different, represent a group selected from hydrogen and methyl, and when p is greater than or equal to 2, the hydrocarbon chain Z₂ optionally contains one double bond,
 - ✓ B represents a group selected from phenyl, pyridyl, thienyl, imidazolyl, furyl, 1,3-benzodioxoly, benzodioxinyl, benzothienyl, benzofuryl, 2,1,3-benzothiadiazolyl, benzofurazanyl, and indolyl,
- ✓ q is an integer from 0 to 7 inclusive,
- \checkmark the group(s) R₁₃, which may be identical or different, is (are) selected from (C_1-C_6) alkyl, halogen, $-CN_{\lambda}$ $-CF_3$, $-NR_{16}R_{17}$, $-OR_{16}$, $-SO_2R_{16}$, $-(CH_2)_kSO_2NR_{16}R_{17}$, $-(CH_2)_kC(=O)OR_{16}$ $-O(CH_2)_kC(=O)OR_{16}$, $-O(CH_2)_kC(=O)NR_{16}R_{17}$, $-(CH_2)_kC(=O)NR_{16}R_{17}$, and $-C(=Q)O-R_{19}-NR_{16}NR_{17}$ in which:
 - k is an integer from 0 to 3 inclusive,
 - R₁₆ and R₁₇, which may be identical or different, are selected from hydrogen and (C_1-C_6) alkyl,
- R_{19} represents a (C_1-C_6) alkylene group optionally, its racemic forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof.
- 8- A compound according to claim 1 wherein n is equal to one, optionally, its racemic 20 forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof.
 - 9- A compound according to claim 1 wherein Z₁ represents a group -CR₉R₁₀ in which R₉ and R₁₀ represent each a hydrogen atom, optionally, its racemic forms, isomers thereof, Noxydes thereof, and its the pharmaceutically acceptable salts thereof.

5.

10

20

10- A compound according to claim 1 wherein A represents a 5- to 6- membered aromatic monocycle or a 3,4-methylenedioxyphenyl group optionally substituted by one or more groups R_4 as defined in the compound of formula (I), optionally, its racemic forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof.

- 11- A compound according to claim 10 wherein A represents a phenyl group optionally substituted by one group R₄ as defined in the compound of the formula (I), optionally, its racemic forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof.
- 12- A compound according to claim 11 wherein A represents a phenyl group, m is equal to one, and R₄ represents a methoxy group or a fluoro group, optionally, its racemic forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof.
- 13- A compound according to claim 10 wherein A represents a 4-pyridinyl group and m is equal to zero, optionally, its racernic forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof.
- 14 A compound according to claim 1 wherein Z represents a -NH group and Y represents an oxygen atom, optionally, its racemic forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof.
 - 15 A compound according to claim 1 wherein W represents a -CH group and X represents a nitrogen atom, optionally, its racemic forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof.
 - 16- A compound according to claim 1 wherein R₃ represent a group of formula:

$$(R_{13})_q$$
 B $(Z_2)_p$

in which p is equal to one, Z_2 represents a methylene group, B represents a phenyl group, q is comprise between 0 to 1 inclusive, R_{13} represents a group selected from -CN,

20

25

- $(CH_2)_k$ - $C(=O)OR_{16}$, - $(CH_2)_k$ - $C(=O)NR_{16}R_{17}$, and -C(=O)O- R_{19} - $NR_{16}NR_{17}$ in which k, R_{16} , R_{17} , and R_{19} are as defined in the compound of formula (I), optionally, its racemic forms, isomers thereof, N-oxydes thereof, and its pharmaceutically acceptable salts thereof.

17- A compound according to claim 1 selected from:

- benzy $\sqrt{4-\text{benzyl-}5-\text{oxo-}4H-[1,2,4]}$ triazolo[4,3-a]quinazol-7-ylcarboxylate,
- 4-pyrid\text{\text{\text{methyl}} 4-benzyl-5-oxo-4}{\text{\text{H-[1,2,4]triazolo[4,3-a]quinazol-7-ylcarboxylate,}}}
- *N*-(3,4-methylenedioxybenzyl)-4-benzyl-5-oxo-4*H*-[1,2,4]triazolo[4,3-*a*]quinazol-7-ylcarboxamide,
- N-(4-pyridylmethyl)-4-benzyl-5-oxo-4H-[1,2,4]triazolo[4,3-a]quinazol-7-ylcarboxamide,
- N-(3,4-methylenedioxybenzyl)-4-benzyl-5-oxo-4H-imidazo[1,2-a]quinazol-7-ylcarboxamide,
- N-(4-pyridylmethyl)-4tbenzyl-5-oxo-4H-imidazo[1,2-a]quinazol-7-ylcarboxamide,
- *N*-(4-methoxybenzyl)-4-benzyl-5-oxo-4,5-dihydro[1,2,4]triazolo[4,3-*a*]quinazoline-7-carboxamide,
- N-[3-(4-pyridylsulphanyl)propyl]-4-benzyl-5-oxo-4,5-dihydro[1,2,4]triazolo-[4,3-a] quinazoline-7-carboxamide,
- N-(3,4-Methylenedioxybenzyl)-4-(4-cyanobenzyl)-5-oxo-4H-[1,2,4]triazolo[4,3-a] quinazol-7-ylcarboxamide
- Methyl 4-{7-[(1,3-benzodioxol-5-ylmethyl)-carbamoyl]-5-oxo-5*H*-[1,2,4]triazolo [4,3-a] quinazol-4-ylmethyl} benzoate
- Methyl 4-{7-[(4-methoxybenzyl) carbamoyl]-5-oxo-5*H*-[1,2,4]triazolo[4,3-*a*] quinazol-4-ylmethyl} benzoate
- Methyl 4-{7-[(pyridin-4-ylmethyl)-carbamoyl]-5-oxo-5*H*-[1,2,4]triazolo[4,3-*a*] quinazol-4-ylmethyl} benzoate
- (2-Dimethylamino-ethyl) 4-[7-(4-fluoro-benzylcarbamoyl)-5-oxo-5*H*-[1,2,4]triazolo [4,3-*a*]quinazol-4-ylmethyl] benzoate
- 4-(4-Dimethylcarbamoyl-benzyl)-5-oxo-4,5-dihydro-[1,2,4]triazolo[4,3-a] quinazoline-7-carboxylic acid 4-methoxy-benzylamide
- N-(pyridin-4ylmethyl)-4-(4-cyanobenzyl)-5-oxo-4H-\[1,2,4\]triazolo[4,3-a]quinazol-7-ylcarboxamide

10

15

- Methyl (4-{7-[(1,3-benzodioxol-5-ylmethyl)-carbamoyl]-5-oxo-5*H*-[1,2,4]triazolo [4,3-a]quinazolin-4-ylmethyl}-phenyl)-acetate
- Methyl (4-{7-[(4-methoxy)-benzylcarbamoyl]-5-oxo-5*H*-[1,2,4]triazolo[4,3-*a*] quinazolin-4-ylmethyl}-phenyl)-acetate
- Methyl (4-{7-[(pyridin-4-yl)-methylcarbamoyl]-5-oxo-5*H*-[1,2,4]triazolo[4,3-*a*] quinazolin-4-ylmethyl}-phenyl)-acetate
- N-(pyridin-4-ylmethyl) 4-[3-(pyridin-4-yl)-2-propen-1-yl]-5-oxo-4H-[1,2,4]triazolo [4,3-a]quinazol-7-ylcarboxamide
- 4-[2-(4-Chloro\phenoxy)-ethyl]-5-oxo-4,5-dihydro-[1,2,4]triazolo[4,3-a] quinazoline-7-carboxylic acid 4-methoxy-benzylamide
- 4-{7-[(4-methoxybenzyl)-carbamoyl]-5-oxo-5*H*-[1,2,4]triazolo[4,3-*a*] quinazol-4-ylmethyl} benzoic acid
- 4-{7-[(1,3-benzodioxol-5-ylmethyl)-carbamoyl]-5-oxo-5*H*-[1,2,4]triazolo [4,3-a]quinazol-4-ylmethyl} benzoic acid
- 4-{7-[(pyridin-4-ylmethyl)-carbamoyl]-5-oxo-5*H*-[1,2,4]triazolo[4,3-*a*] quinazol-4-ylmethyl} benzoic acid
- 4-{7-[(4-fluoro)-benzylcarbamoyl]-5-oxo-5*H*-[1,2,4]triazolo[4,3-*a*] quinazol-4-ylmethyl} benzoic acid
- $(4-{7-[(4-methoxy)-benzylcarbamoyl]-5-oxo-5}H-[1,2,4]triazolo[4,3-a]$ quinazolin-4-ylmethyl}-phenyl)-acetic acid
- (4-{7-[(1,3-benzodioxol-5-ylmethyl)-carbamoyl]-5-oxo-5*H*-[1,2,4]triazolo [4,3-*a*]quinazolin-4-ylmethyl}-phenyl)-acetic acid, and
- (4-{7-[(pyridin-4-yl)-methylcarbamoyl]-5-oxo-5*H*-[1,2,4]triazolo[4,3-*a*] quinazolin-4-ylmethyl}-phenyl)-acetic acid.
- 25 **18-** A compound according to claim 1 selected from: benzyl 4-benzyl-5-oxo-4*H*-[1,2,4]triazolo[4,3-*a*] quinazol-7-ylcarboxylate, 4-pyridylmethyl 4-benzyl-5-oxo-4*H*-[1,2,4]triazolo[4,3-*a*]quinazol-7-ylcarboxylate, *N*-(3,4-methylenedioxybenzyl)-4-benzyl-5-oxo-4*H*-[1,2,4]triazolo[4,3-*a*]quinazol-7-ylcarboxamide,
- 30 N-(4-methoxybenzyl)-4-benzyl-5-oxo-4,5-dihydro[1,2,4]triazolo[4,3-a]quinazoline-7-carboxamide,

N-(3,4-Methylenedioxybenzyl)-4-(4-cyanobenzyl)-5-oxo-4H-[1,2,4]triazolo[4,3-a] quinazol-7-ylcarboxamide

Methyl $4-\{7-[(1,3-benzodioxol-5-ylmethyl)-carbamoyl]-5-oxo-5H-[1,2,4]triazolo[4,3-a]$ quinazol-4-ylmethyl} benzoate

- Methyl 4- $\sqrt[4]{-[(4-methoxybenzyl)-carbamoyl]-5-oxo-5}H-[1,2,4]triazolo[4,3-a] quinazol-4-ylmethyl} benzoate$
 - 4-(4-Dimethylcarbamoyl-benzyl)-5-oxo-4,5-dihydro-[1,2,4]triazolo[4,3-a]quinazoline-7-carboxylic acid 4\text{methoxy-benzylamide}

Methyl $(4\{7-[(1,3-benzodioxol-5-ylmethyl)-carbamoyl]-5-oxo-5}H-[1,2,4]triazolo$

- 10 [4,3-a]quinazolin-4-\(\chi\)lmethyl\}-phenyl\)-acetate
 - Methyl (4- $\{7-[(4-methoxy)-benzylcarbamoyl]-5-oxo-5H-[1,2,4]triazolo[4,3-a]$ quinazolin-4-ylmethyl $\}$ -phenyl)-acetate
 - 4-{7-[(4-methoxybenzyl)-carbamoyl]-5-oxo-5*H*-[1,2,4]triazolo[4,3-*a*]quinazol-4-ylmethyl} benzoic acid
- 4-{7-[(1,3-benzodioxol-5-ylmethyl)-carbamoyl]-5-oxo-5*H*-[1,2,4]triazolo[4,3-*a*]quinazol-4-ylmethyl} benzoic acid
 - 4-{7-[(pyridin-4-ylmethyl)-carbamoyl]-5-oxo-5*H*-[1,2,4]triazolo[4,3-*a*]quinazol-4-ylmethyl} benzoic acid
 - $4-\{7-[(4-fluoro)-benzylcarbamoyl]-\frac{3}{7}-oxo-5H-[1,2,4]triazolo[4,3-a]quinazol-4-ylmethyl\}$
- benzoic acid

 (4-{7-[(4-methoxy)-benzylcarbamoyl]-5-oxo-5*H*-[1,2,4]triazolo[4,3-*a*]quinazolin-4ylmethyl}-phenyl)-acetic acid
 - $(4-{7-[(1,3-benzodioxol-5-ylmethyl)-carbamoyl]-5-oxo-5}H-[1,2,4]triazolo[4,3-a]$ quinazolin-4-ylmethyl}-phenyl)-acetic acid, and
- 25 $(4-\{7-[(pyridin-4-yl)-methylcarbamoyl]-5-oxo-5H-[1,2,4]triazolo[4,3-a]quinazolin-4-ylmethyl\}-phenyl)-acetic acid.$
 - 19. Process for manufacturing a compound of general formula (I)

W=X N N R_3 (7a)

in which W, X, and R₃ are as defined in the compound of formula (I), with the compound of general formula (7g), in the presence of a base:

 $(R_4)_m$ hal (7g)

in which hal is a halogen atom, and in which R₄, n, m, Z₁ and A are as in the compound of formula (I),

to give the compound of general formula (7c), which is a particular case of the compounds of formula (I):

$$(R_4)_m \xrightarrow{A} (Z_1)_n \xrightarrow{O} (R_3)$$

$$(R_4)_m \xrightarrow{A} (Z_1)_n \xrightarrow{O} (R_3)$$

$$(R_4)_m \xrightarrow{A} (Z_1)_n \xrightarrow{O} (R_3)$$

in which W, X, R₃, R₄, n, m, Z₁ and A are as defined hereinbefore.

20. Process for manufacturing a compound of general formula (I)

5

10

15

(7a):

in which W X, R_3 , R_4 , n, m, Z_1 and A are as defined in claim 1, Y is O and Z is -NR₈, in which R_8 is as defined in claim 1, the said process being characterized in that it comprises the reaction of the compound of formula (7a):

$$W=X$$

$$N$$

$$N$$

$$N$$

$$R_3$$

$$(7a)$$

in which W, X, and R_3 are as defined in the compound of formula (I), with the compound of general formula (7i):

5

15

$$(R_4)_m NHR_8 \qquad (7i)$$

in which R₄, R₈, n, m, Z₁ and A are as defined in the compound of formula (I),

by activating the acid function with an activator, in the presence of disopropylethylamine (DIPEA) and in a solvent, to give the compound of general formula (7d), which is a particular case of the compounds of formula (I):

$$(R_4)_m \xrightarrow{A} (Z_1)_n \xrightarrow{Q} Q \qquad (7d)$$

in which W, X, R₃, R₄, R₈, n, m, Z₁ and A are as defined hereinbefore.

21 - Process for manufacturing a compound of general formula (I),

$$(R_4)_m \xrightarrow{A} (Z_1)_n \xrightarrow{Y} O \xrightarrow{N} R_3$$
 (I)

in which W, X, R_3 , R_4 , n, m, Z_1 and A are as defined in claim 1, Y is O and Z is S, the said process being characterized in that it comprises the reaction of the compound of formula (7a):

$$W=X$$

$$N$$

$$N$$

$$N$$

$$R_3$$

$$(7a)$$

in which W, X, and R_3 are as defined in the compound of formula (I), with the compound of general formula (7j):

5

10

15

$$(R_4)_m \xrightarrow{A} (Z_1)_n \xrightarrow{SH} (7j)$$

in which R₄, n, m, Z₁ and A are as defined in the compound of formula (I),

by activating the acid function with an activator, in the presence of DIPEA in a solvent, to give the compound of general formula (7e), which is a particular case of the compounds of formula (I):

$$(R_4)_m \xrightarrow{A} (Z_1)_n \xrightarrow{O} (R_3)$$

$$(7e)$$

in which W, X, R₃, R₄, n, m, Z₁ and A are as defined here inbefore.

22 -. Process for manufacturing a compound of general formula (I),

in which W, X, R_3 , R_4 , n, m, Z_1 and A are as defined in claim 1, Y is O and Z is O, the said process being characterized in that it comprises the reaction of the compound of formula (7b):

 $\bigvee_{\text{CIO}_2\text{C}}\bigvee_{\text{N}}\bigvee_{\text{N}}^{\text{N}}\bigvee_{\text{R}_3}^{\text{N}}$ (7b)

in which W, X, and R_3 are as defined in the compound of formula (I), with the compound of formula (7h):

TOUVEDS 4 CELVE

5

10

$$(R_4)_{\mathfrak{m}}$$
 $(Z_1)_{\mathfrak{m}}$ OH $(7h)$

in which R_4 , n, m, Z_1 and A are as defined in the compound of formula (I), in the presence of a base, to give the compound of general formula (7c), which is a particular case of the compounds of formula (I):

$$(R_4)_m \xrightarrow{A} (Z_1)_n \xrightarrow{O} (R_3)$$

$$(7c)$$

in which W, X, R₃, R₄, n, m, Z₁ and A are as defined hereinbefore.

23 -. Process for manufacturing a compound of general formula (I),

in which W, X, R_3 , R_4 , n, m, Z_1 and A are as defined in claim 1, Y is O and Z is -NR₈, in which R_8 is as defined in claim 1, the said process being characterized in that it comprises the reaction of the compound of formula (7b):

$$\bigvee_{\text{ClO}_2\text{C}}\bigvee_{\text{N}}\bigvee_{\text{N}}\bigvee_{\text{R}_3}$$
 (7b)

in which W, X, and R₃ are as defined in the compound of formula (I), with the compound of formula (7i):

$$(R_1)_m$$
 $(Z_1)_n$ NHR_8 $(7i)$

in which R_4 , R_8 , n, m, Z_1 and A are as defined in the compound of formula (I), in the presence of a base, to give the compound of general formula (7d), which is a particular case of the compounds of formula (I):

$$(\mathbf{R}_{4})_{\mathbf{m}} \qquad \mathbf{A} \qquad (\mathbf{Z}_{1})_{\mathbf{n}} \qquad \mathbf{O} \qquad \mathbf{N} \qquad \mathbf{N}$$

$$(\mathbf{R}_{4})_{\mathbf{m}} \qquad \mathbf{O} \qquad \mathbf{N} \qquad \mathbf{R}_{3} \qquad (\mathbf{7d})$$

in which W, X, R₃, R₄, R₈, n, m, Z₁ and A are as defined hereinbefore.

24 -. Process for manufacturing a compound of general formula (I),

5

in which W, X, R_3 , R_4 , n, m, Z_1 and A are as defined above, Y is O and Z is S, the said process being characterized in that it comprises the reaction of the compound of formula (7b):

 $\bigvee_{\text{ClO}_2\text{C}}\bigvee_{\text{N}}\bigvee_{\text{N}}^{\text{N}}\bigvee_{\text{R}_3}^{\text{N}}$ (7b)

in which W, X, and R_3 are as defined in the compound of formula (I), with the compound of general formula (7j):

IUU/5554 UCI4UC

5

10

$$(R_4)_{\rm m} \xrightarrow{A} (Z_1)_{\rm n} \text{SH}$$
 (7j)

in which R_4 , n, m, Z_1 and A are as defined in the compound of formula (I), to give the compound of general formula (7e), which is a particular case of the compounds of formula (I):

$$(R_4)_m \xrightarrow{A} (Z_1)_n \xrightarrow{N} (N_1)_m (7e)$$

in which W, X, R_3 , R_4 , n, m, Z_1 and A are as defined hereinbefore.

25 -. Process for manufacturing a compound of general formula (I),

in which W, X, R_3 , R_4 , n, m, Z_1 and A are as defined above, Y is O and Z is -CHRa, in which Ra represents a group selected from hydrogen, (C_1-C_6) alkyl, aryl, aryl (C_1-C_6) alkyl, aromatic heterocycle, non-aromatic heterocycle, and cycloalkyl, the said process being characterized in that it comprises the reaction of the compound of formula (7b):

$$W=X$$

$$N$$

$$N$$

$$N$$

$$R_3$$

$$(7b)$$

in which W, X, and R_3 are as defined in the compound of formula (I), with the compound of general formula (7k):

$$(R_4)_m$$
 A
 $(Z_1)_n$
 $Mg-Hal$
 $(7k)$

in which Ra represents a group selected from hydrogen, (C_1-C_6) alkyl, aryl, aryl (C_1-C_6) alkyl, aromatic heterocycle, non-aromatic heterocycle, and cycloalkyl, Hal represents a halogen atom, and R₄, n, m, Z₁ and A are as defined in the compound of formula (I),

to give the compound of general formula (7f), which is a particular case of the compounds of formula (I):

$$(R_4)_m \xrightarrow{A} (Z_1)_n \xrightarrow{O} O \qquad (7f)$$

in which W, X, R₃, R₄, Ra, n, m, Z₁ and A are as defined hereinbefore.

10

$$(R_{2})_{m}$$

$$A$$

$$(Z_{1})_{n}$$

$$Y$$

$$O$$

$$N$$

$$R_{3}$$

$$(I)$$

in which W, X, R₃, R₄, n, m, Z, Z₁ and A are as defined in claim 1, and Y is S, the said process being characterized in that it comprises the reaction of the compound (8a):

$$(R_4)_m$$

$$A$$

$$Z_1)_n$$

$$O$$

$$N$$

$$R_3$$

$$(8a)$$

in which W, X, R₃, R₄, n, m, Z, Z₁ and A are as defined in the compound of formula (I), with Lawesson's reagent or P₂S₅, to give the compound of general formula (8b), which is a particular case of the compounds of formula (I):

$$(\mathbf{R}_{4})_{\mathbf{m}} \xrightarrow{\mathbf{A}} (\mathbf{Z}_{1})_{\mathbf{n}} \times \mathbf{S}$$

$$(\mathbf{8b})$$

in which W, X, R_3 , R_4 , n, m, Z, Z_1 and A are as defined hereinbefore.

27 -. Process for manufacturing a compound of general formula (I),

$$(R_4)_m \xrightarrow{A} (Z_1)_n \xrightarrow{Y} O \xrightarrow{N} R_3$$
 (I)

in which W, X, R₃, R₄, n, m, Z₁ and A are as defined in claim 1, Y is NH and Z is O, the said process being characterized in that it comprises the reaction of compound (9a):

5

10

$$\begin{array}{c}
90 \\
W = X \\
N \\
N \\
N \\
R_3
\end{array}$$
(9a)

in which W, X, and R₃ are as defined in the compound of formula (I), with the compound of general formula (7h):

$$(R_4)_m$$
 A $(Z_1)_n$ OH $(7h)$

in which R_4 , n, m, Z_1 and A are as defined in the compound of formula (I),

to give the compound of general formula (9b), which is a particular case of the compounds of formula (I):

$$(R_4)_m$$

$$A$$

$$(Z_1)_n$$

$$N$$

$$N$$

$$N$$

$$R_3$$

$$(9b)$$

in which W, X, R₃, R₄, n, m, Z₁ and A are as defined hereinbefore.

10 28 -. Process for manufacturing a compound of general formula (I),

$$(R_4)_m \xrightarrow{A} (Z_1)_n \xrightarrow{Y} O \xrightarrow{N} R_3$$
 (I)

in which $W,\,X,\,R_3,\,R_4,\,n,\,m,\,Z_1$ and A are as defined in claim 1, Z is -NR8 and Y is NH, the said process being characterized in that it comprises the reaction of compound (9a):

IIIO75654.0E140E

5

$$\begin{array}{c}
W = X \\
N \longrightarrow N \\
N \longrightarrow R_3
\end{array}$$
(9a)

in which W, X and R₃ are as defined in the compound of formula (I), with the compound of general formula (7i):

$$(R_4)_m \xrightarrow{A} (Z_1)_n NHR_8 \qquad (7i)$$

in which R_4 , n, m, Z_1 and A are as defined in the compound of formula (I), to give the compound of general formula (9c), which is a particular case of the compounds of formula (I):

$$(R_4)_m$$

$$A$$

$$(Z_1)_n$$

$$N$$

$$N$$

$$N$$

$$N$$

$$N$$

$$N$$

$$N$$

$$N$$

$$N$$

$$R_3$$

$$(9c)$$

in which W, X, R₃, R₄, R₈, n, m, Z₁ and A are as defined hereinbefore.

29 -. Process for manufacturing a compound of general formula (I), 10

$$(R_4)_m \xrightarrow{A} (Z_1)_n \xrightarrow{Y} O \xrightarrow{N} R_3$$
 (I)

in which W, X, R₃, R₄, n, m, Z₁ and A are as defined in claim1, Z is S and Y is NH, the said process being characterized in that it comprises the reaction of compound (9a):

$$\begin{array}{c|c}
W = X \\
N & N \\
N & R_3
\end{array}$$
(9a)

$$(R_4)_m \xrightarrow{A} (Z_1)_n \xrightarrow{SH} (7j)$$

in which R_4 , n, m, Z_1 and A are as defined in the compound of formula (I),

to give the compound of general formula (9d) which is a particular case of the compounds of formula (I):

$$(\mathbf{R}_4)_{\mathbf{m}} \qquad (\mathbf{Z}_1)_{\mathbf{n}} \qquad (\mathbf{9d})$$

in which W, X, R_3 , R_4 , n, m, λ_1 and A are as defined hereinbefore.

30 -. Process for manufacturing a compound of general formula (I),

$$(R_4)_m$$

$$A$$

$$(Z_1)_n$$

$$Y$$

$$O$$

$$N$$

$$R_3$$

$$(I)$$

in which W, X, R_3 , R_4 , n, m, Z_1 and A are as defined in claim 1, Z is -CHRa in which Ra represents a group selected from hydrogen, (C_1-C_6) alkyl, aryl, aryl (C_1-C_6) alkyl, aromatic heterocycle, non-aromatic heterocycle, and cycloalkyl, and Y is N-Rb in which Rb is a (C_1-C_6) alkyl, the said process being characterized in that it comprises the reaction of compound (7f):

$$(R_4)_m$$

$$A$$

$$(Z_1)_n$$

$$O$$

$$N$$

$$R_3$$

$$(7f)$$

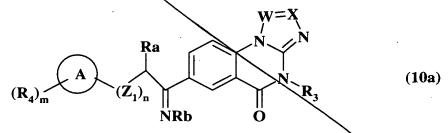
Sub Bi

10

15

in which W, X, R_3 , R_4 , n, m, Z_1 and A are as defined in the compound of formula (I), and in which R_2 is as defined hereinbefore,

with Rb-NH₂, in which Rb represents a (C₁-C₆)alkyl group, in a presence of a dehydrating agent, to give the compound of general formula (10a), which is a particular case of the compounds of formula (I):



in which W, X, R₃, R₄, n, m, Z₁, Ra, Rb and A are as defined hereinbefore.

- 31.- Pharmaceutical composition comprising a compound according to any one of Claims1 to 18 and a pharmaceutically acceptable excipient.
- 32 -. Use of a compound according to any one of Claims 1 to 18, for the preparation of a medicinal product intended for treating a disease or complaint involving therapy by inhibition of type-13 matrix metalloprotease.
- 33 -. Use of a compound according to any one of Claims 1 to 18, for the preparation of a medicinal product intended for treating arthritis, rheumatoid arthritis, osteoarthritis, osteoporosis, periodontal diseases, inflammatory bowel disease, psoriasis, multiple sclerosis, cardiac insufficiency, atherosclerosis, asthma, chronic obstructive pulmonary diseases, age-related macular degeneration and cancer.
 - 34 Use according to Claim 33, characterized in that the disease is arthritis.
- 20 35 Use according to Claim 33, characterized in that the disease is osteoarthritis.
 - 36 -. Use according to Claim 33, characterized in that the disease is rheumatoid arthritis.

- 37 A method for treating a disease or complaint involving a therapy by inhibition of MMP-13, the said method comprising the administration of an effective amount of a compound according to any one of Claims 1 to 18 to a patient.
- 38- A method for treating a disease according to Claim 37 charactherized in that the disease or the complaint are selected from arthritis, rheumatoid arthritis, osteoarthritis, osteoporosis, periodontal diseases, inflammatory bowel disease, psoriasis, multiple sclerosis, cardiac insufficiency, atherosclerosis, asthma, chronic obstructive pulmonary disease (COPD), age-related macular degeneration (ARMD) and cancers.
- **39-** A method for treating a disease according to Claim 37 charactherized in that the disease is arthritis.
- **40-** A method for treating a disease according to Claim 37 charactherized in that the disease is osteoarthritis.
- 41- A method for treating a disease according to Claim 37 charactherized in that the disease is rheumatoid arthritis.

add BI